

Preliminary Amendment
U.S. Application No. 10/646,134

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REMARKS

Claims Rejections

Claims 1-5, 7-11, and 13-16 were rejected under 35USC103(a) over Sankey et al. 1995 ("Sankey") in view of Tipman et al. U.S. Patent No. 5,876,592 ("Tipman").

Sankey discloses bitumen separation into a lighter overhead fraction and a heavier bottom fraction, and mentions solvent deasphalting in the Abstract (unspecified).

Tipman discloses gas plant bitumen emulsion separation and the rejection asserts the obviousness of using the Tipman condensate for added value of overhead product. Applicants respectfully traverse because (i) Sankey does not disclose bitumen separation using "a two stage flash separation process" as defined in the specification, and (ii) Tipman does not teach separation of bitumen (even the froth) into a light overhead fraction and a heavy bottom fraction, nor does Tipman suggest using a lower paraffin content gas plant diluent, both as required by claim 1.

While various arguments are set forth concerning the dependent claims, the basic requirements of independent claim 1 are not taught or suggested.

Tipman does not teach how to split bitumen but rather separates bitumen from water and solids in a froth by addition of hydrocarbon solvent fluid to cause an inversion of the hydrocarbon phase to the aqueous phase so as to separate the water. See Tipman at column 3, lines 1-15. The discussion at column 3, lines 52-55 further sets forth the water separation but Tipman does not teach or suggest the invention for separating the bitumen itself into a light fraction and a heavy fraction (both hydrocarbon, neither water). Example X just discloses a condensate use for separation of solids, water, and hydrocarbon. The claim is not met.

Accordingly, Tipman is inapplicable to the invention because it does not teach separation of the bitumen. Sankey mentions solvent deasphalting but neither reference teaches separation of bitumen as required by the claim.

It is not an obvious variation to use the flash separation of the invention over a distillation process. Rather, only the inventive recognition of ability to use all streams at the recovery site

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leads to the invention. The present inventors have made that recognition and applied appropriate technology not suggested in the prior art to provide a useful invention. The prior art does not recognize the on-site use of streams as separated in the defined flash separation and does not suggest the bitumen separation with available condensate.

Since Sankey does not teach either separation of claim 1 and since Tipman does not teach a bitumen separation into two hydrocarbon fractions, reconsideration and allowance of the claims is requested.

Claims 12 and 17 were rejected under 35USC103(a) over Sankey in view of Tipman and further in view of Wu U.S. Patent No. 4,119,149 ("Wu").

Applicants respectfully traverse because of the failure of the principal references to teach or suggest the invention and because Wu merely suggests a downhole flash similar to Tipman so as to separate the water phase from the bitumen phase, not a separation of the bitumen into a light fraction and a heavy fraction as defined by the claims. Wu does not address treatment of the bitumen or other petroleum liquid product but merely suggests separation of the vapor product into water and light hydrocarbon for reinjection with fresh steam. The skilled artisan is led away from the present invention wherein the light overhead is usable as a product stream such as light crude and the bitumen is used as food. Wu is just the opposite with the hydrocarbon or bitumen heavy product becoming the product stream and the light overhead reinjected. The flash separations of the claimed invention are not taught or suggested.

The response concerning Flash Separation argues the obviousness to choose a less exact separation technique but only the inventors' recognition of the ability to use separated bitumen heavy for fuel and provide the light stream as a crude product (not water separation) suggests using less exact techniques. Furthermore, none of the references teach either of the separation techniques of the claimed invention.

The response concerning Gas Plant Diluent Separation is inappropriate because Tipman does not teach using the condensate for separation of bitumen into a light overhead and a bitumen bottom as claimed. Rather, Tipman merely teaches a predominantly water separation. Also, regarding Wu, fuel cost reduction is not evident as obtained with the invention since Wu

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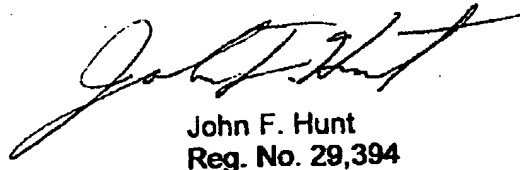
reinjects the overhead rather than provides it as a downstream product crude, exactly contrary to the invention.

Reconsideration and allowance of the claims is respectfully requested.

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Certificate of Facsimile Transmission

I hereby certify that this correspondence is being transmitted via facsimile to Examiner Singh, United States Patent and Trademark Office at (571) 273-8300 on January 22, 2007.



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